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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/472,401	12/27/1999	MASAHIRO SUEYOSHI	YAMAP0689US	8682

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EXAMINER	
AN, SHAWN S.	

ART UNIT	PAPER NUMBER
2613	13

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/472,401	SUEYOSHI ET AL.	
	Examiner	Art Unit	
	Shawn S An	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,6,9,10 and 13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6,9,10 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. The request filed on 4/5/04 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/472,401 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Amendment

2. As per Applicant's instructions in Paper 12 as filed on 4/5/04, claims 1-2 and 10 have been amended.

Response to Remarks

3. Applicant's arguments with respect to amended claims 1-2 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-2, 6, 9, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al (5,617,145).

Regarding claim 2, Huang et al discloses an encoding device, comprising:

an encoding section (Fig. 1) for generating bit streams having a variable frame length from an input audio signal, a maximum frame length of the bit streams being fixed (Constant Rate);

a storage section (11) for storing the bit streams generated by the encoding section; and

a transfer section (14) for transferring the bit streams from the storage section (11) at a constant transfer (bit) rate,

wherein the storage section includes a buffer having a capacity corresponding to at least a value which corresponds to maximum frame length (max bit stream generated in one frame time period) (Fig. 9, Bfmax),

wherein the encoding section generates a bit stream so that a sum of an amount of the bit streams stored in the storage section at the moment when the bit stream for one frame time period are generated (Fig. 9, 2Td) and an amount of the bit stream for one frame time period (Td) is equal to or less than the capacity of the storage section (Fig. 9, Bfmax).

Huang et al does not disclose the transfer section transferring the bit streams at a changeable transfer rate.

However, Huang et al discloses variable (changeable) bit (transfer) rate for speech coding, which has been considered for packet switching networks, etc (col. 1, lines 57-60), and variable bit rate audio encoder (Fig. 4, 21).

Furthermore, Haskell et al teaches an encoding device, comprising:

an encoding section (Fig. 2, 205);

a storage section (206) for storing the bit streams generated by the encoding section; and

a transfer section (Fig. 2, 210; Fig. 1, 100, 101) for transferring the bit streams from the storage section (206) at a changeable transfer (bit) rate (col. 2, lines 25-45).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an encoding device as taught by Huang et al to incorporate the well known concept of the transfer section for transferring the bit streams from the storage section at a changeable transfer rate as taught by Haskell et al in order to prevent a buffer overflow and/or underflow by adjusting the transfer bit rate.

Regarding claims 1, 6, and 10, Huang et al discloses an encoding device, comprising:

an encoding section (Fig. 1) for generating bit streams having a variable frame length from an input audio signal, a maximum frame length of the bit streams being fixed (Constant Rate);

a storage section (11) for storing the bit streams generated by the encoding section; and

a transfer section (14) for transferring the bit streams from the storage section (11) at a constant transfer (bit) rate,

wherein the storage section includes a buffer having a capacity corresponding to at least a value which can be obtained by subtracting an amount of the bit streams transferable in one frame time period (Fig. 9, Td) at a minimum possible transfer (bit) rate (Fig. 3) from a value of the maximum frame length (max bit stream generated in one frame time period) (Fig. 9, Bfmax).

Huang et al does not specifically disclose the storage section having the capacity of twice the maximum frame length, and the transfer section transferring the bit streams at a changeable transfer rate.

However, Huang et al discloses variable (changeable) bit (transfer) rate for speech coding, which has been considered for packet switching networks, etc (col. 1, lines 57-60), and variable bit rate audio encoder (Fig. 4, 21).

Further, Haskell et al teaches an encoding device, comprising:

an encoding section (Fig. 2, 205);

a storage section (206) for storing the bit streams generated by the encoding section; and

a transfer section (Fig. 2, 210; Fig. 1, 100, 101) for transferring the bit streams from the storage section (206) at a changeable transfer (bit) rate (col. 2, lines 25-45).

Furthermore, the Examiner takes official notice that expanding or doubling the size of the encoder storage device is conventionally well known in the art for storing/accommodating additional bit streams.

Furthermore, the Examiner takes official notice that the decoding device decoding the compressed audio/video data is obviously well known features for reverse processing the encoding device for displaying the compressed data.

Moreover, Huang et al discloses bit rate determination module (Fig. 5, 106) for determining maximum transfer bit rate.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an encoding device as taught by Huang et al to incorporate the well known concept of expanding or doubling the size of the encoder storage device so that the storage section has the capacity of twice the maximum frame length for the well known reason of storing/accommodating additional bit streams or a bit stream accumulating section having the capacity of at least a value which is obtained by multiplying the maximum frame length with a value obtained by dividing the maximum transfer rate divided by minimum transfer rate so as to avoid a buffer overflow, and also incorporate the well known concept of the transfer section for transferring the bit streams from the storage section at a changeable transfer rate as taught by Haskell et al in order to prevent a buffer overflow and/or underflow by adjusting the transfer bit rate.

Regarding claim 9, Huang et al discloses a transmitter (Fig. 1, 14) for transmitting the bit streams. Further, the Examiner takes official notice that a receiver is considered an obvious feature for receiving the bit streams, and decoding the compressed audio bit streams.

Regarding claim 13, Huang et al discloses an audio bit stream (Fig. 1, 3).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ***Shawn S An*** whose telephone number is 703-305-0099. The Examiner can normally be reached on Flex hours (10).

7. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHAWN S. AN
PATENT EXAMINER

SSA
Primary Patent Examiner
4/21/04